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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,621	07/08/2003	Kyeong-Soo Han	3364P117	1477

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EXAMINER	
RICHMOND, LEAH L	
ART UNIT	PAPER NUMBER
2609	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/15/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/615,621	HAN ET AL.	
	Examiner	Art Unit	
	Leah L. Richmond	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 July 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Foreign Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Objections to Drawings

Fig. 3 shows more detail about the P2PE layer (13) and the FRM layer (16) that are shown in Fig. 2. The upper block of Fig. 3 corresponds to the FRM layer of Fig. 2, and is labeled "16". The lower block of Fig. 3 corresponds to the P2PE layer of Fig. 2. However, the lower block of Fig. 3 is not labeled "13" or "P2PE" to clarify what it is depicting.

Appropriate correction is required.

Objections to Specification

Page 13, line 1 states: "As shown in Fig. 3, the P2PE layer 13 ..." However, there is no "13" or "P2PE" label in Fig. 3.

Page 13, line 22 states: "With reference to Fig. 4, the frame receiver 131 of the P2PE layer 13 ..." However, there is no frame receiver 131 in Fig. 4. This line should be changed to read "... the frame receiver 131 of Fig. 3 ...".

Page 14, line 17 states: "... address determining unit 161 ..." and lines 20 – 22 state: "The address determining unit 161 provides the results of the

determination to the frame processor 162." For clarity, the text should mention that 161 and 162 are elements of Fig. 3.

Page 15, lines 8 – 9 state: "... the upstream frame processor 162, ...with reference to Fig. 5 ..." However, there is no element 162 in Fig. 5. Element 162 is in Fig. 3.

Appropriate correction is required.

Objections to Claims

The first line of claim 5 states: "The system as in either claim 2, ..." It should state: "The system of claim 2, ..."

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 3, 4, 5, 6, and **7** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Song et al. (U.S. Patent Application Publication # 2003/0235205)** in view of **RFC 3422 ("Forwarding Media Access Control (MAC) Frames over Multiple Access Protocol over Synchronous Optical Network/Synchronous Digital Hierarchy (MAPOS)")** and further in view of **Song et al. (U.S. Patent Application Publication # 2003/0190168)**.

Consider **claim 1**, Song et al. (# 2003/0235205) clearly show and disclose a communication system supporting peer-to-peer communication between ONUs in an Ethernet-based PON, the system comprising a physical layer receiving frames transmitted from an OLT and data link layers including an emulation later, a MAC layer, a MAC control layer, and a MAC emulation layer that process frames received through the physical layer (Figs. 6 and 10 and page 3, paragraph [0036]: "Fig. 6 is a view illustrating an Ethernet PON system

configuration in accordance with a preferred embodiment of the present invention. The Ethernet PON system includes a single OLT 510 and a plurality of ONUs 610 connected to the OLT 510 in the form of a tree topology. The ONU 610 includes 802.3 PHY layer 620, 802.3 MAC layer 630, a filtering function layer 640, and a LLC layer 650."). Song et al. (# 2003/0235205) do not disclose a layer for generating and managing an address table that matches PON-tags of frames received and transmission point addresses. However, RFC 3422 clearly shows and discloses a network adapter with a MAPOS interface that dynamically generates address tables with entries from frames that it receives (Fig. 8 and Section 3.3.2. Dynamic setup of address table: "A NA discovers entries for its address table from incoming encapsulated MAPOS frames ... The timer is reset each time an encapsulated MAPOS frame with the same source MAC address is received ... If a discovered MAPOS address for a MAC address differs from the previously discovered address, the new one takes precedence and the address table entry must be overwritten."). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the interface that dynamically generates address tables with entries from frames that it receives as taught by RFC 3422 in the communication system as in Song et al. for the purpose of having the most recent address information available in the address table. Song et al. (# 2003/0235205) in view of RFC 3422 do not disclose a frame reflecting and multiplexing layer. However, Song et al. (# 2003/0190168) clearly show and disclose a frame reflecting and multiplexing layer for transmitting frames to an upstream layer or a downstream

layer depending on the target address of the frames (Figs. 9 and 12 and page 4, paragraphs [0046] and [0047]: "Upon receiving the tag Ethernet frame (Step 421), the LLID/MUX/DEMUX layer 320 of the OLT 310 determines whether a tag Ethernet frame type is recorded in the Ethernet type field (Step 422). If so, the LLID/MUX/DEMUX layer 320 determines a corresponding port of the bridge 330 by examining the LLID field (Step 423). The LLID/MUX/DEMUX layer 320 thereafter deletes the Ethernet type field and the LLID field from the Ethernet frame, recalculates FCS (Step 424), and then transmits the resulting Ethernet frame to the bridge 330 through a corresponding port. After receiving the Ethernet frame (Step 411), the bridge 330 determines a destination address of the Ethernet frame and transmits the Ethernet frame to the LLID/MUX/DEMUX layer 320 through the particular one of the ports 331 – 335 that corresponds to the destination address (Step 412)."). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the frame reflecting and multiplexing layer as taught by Song et al. (# 2003/0190168) in the communication system as in Song et al. (# 2003/0235205) in view of RFC 3422 for the purpose of forwarding the frame to the correct destination based on the destination address.

Consider **claim 2**, and as applied to claim 1, RFC 3422 clearly shows and discloses a network adapter that comprises a frame receiver receiving a frame transmitted from the physical layer, an address table processor generating the address table that matches the frame address with a transmission point address, a frame processor transmitting the frame to an upper layer, a unit that receives a

frame transmitted from an upper layer and searches the address table to find the target address, and a processor that attaches a tag corresponding to the target address to a preamble of the frame. (Fig. 8 and Section 3.3.2. Dynamic setup of address table: "A NA discovers entries for its address table from incoming encapsulated MAPOS frames. The NA adds the pair {source MAC address, source MAPOS address} to its address table when it receives an encapsulated MAPOS frame. ... The timer is reset each time an encapsulated MAPOS frame with the same source MAC address is received. ... If a discovered MAPOS address for a MAC address differs from the previously discovered address, the new one takes precedence and the address table entry must be overwritten. ... In NA B2, the received MAPOS frame is decapsulated, and the MAC frame is forwarded to LAN N2. ... Via the Ethernet interface on NA B2, the ARP reply frame is received, and MAPOS encapsulation is done. ... Because the entry {h1, b1} is registered in the address table, b1 is determined to be the destination MAPOS address. The bridged frame is forwarded to the MAPOS network. MAPOS network delivers the bridged MAPOS frame to NA B1.").

Consider **claim 3**, and as applied to claim 2, Song et al. (# 2003/0190168) clearly show and disclose a frame reflecting and multiplexing layer that comprises an address determining unit for determining a target address and an upstream frame processor that either forwards the frame towards an upstream layer or reflects the frame toward an ONU depending on the address determination results (Figs. 9 and 12 and page 4, paragraphs [0046] and [0047]: "Upon receiving the tag Ethernet frame (Step 421), the LLID/MUX/DEMUX layer

320 of the OLT 310 determines whether a tag Ethernet frame type is recorded in the Ethernet type field (Step 422). If so, the LLID/MUX/DEMUX layer 320 determines a corresponding port of the bridge 330 by examining the LLID field (Step 423). The LLID/MUX/DEMUX layer 320 thereafter deletes the Ethernet type field and the LLID field from the Ethernet frame, recalculates FCS (Step 424), and then transmits the resulting Ethernet frame to the bridge 330 through a corresponding port. After receiving the Ethernet frame (Step 411), the bridge 330 determines a destination address of the Ethernet frame and transmits the Ethernet frame to the LLID/MUX/DEMUX layer 320 through the particular one of the ports 331 – 335 that corresponds to the destination address (Step 412).").

Song et al. (# 2003/0190168) do not disclose that the address determining unit generates and manages an address table or that the target address of a frame is determined based on the contents of the address table. However, RFC 3422 clearly shows and discloses an address determining unit that generates and manages an address table and determines a target address of a frame based on the address table (Fig. 8 and RFC 3422, Section 3.3.2. Dynamic setup of address table: "A NA discovers entries for its address table from incoming encapsulated MAPOS frames. The NA adds the pair {source MAC address, source MAPOS address} to its address table when it receives an encapsulated MAPOS frame. .... The timer is reset each time an encapsulated MAPOS frame with the same source MAC address is received. ... If a discovered MAPOS address for a MAC address differs from the previously discovered address, the new one takes precedence and the address table entry must be overwritten. ...

In NA B2, the received MAPOS frame is decapsulated, and the MAC frame is forwarded to LAN N2. ... Via the Ethernet interface on NA B2, the ARP reply frame is received, and MAPOS encapsulation is done. ... Because the entry {h1, b1} is registered in the address table, b1 is determined to be the destination MAPOS address. The bridged frame is forwarded to the MAPOS network. MAPOS network delivers the bridged MAPOS frame to NA B1."). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the address determining unit that generates and manages an address table as taught by RFC 3422 in the frame reflecting and multiplexing layer as in Song et al. (# 2003/0190168) for the purpose of creating an address table that contains the latest information for use in forwarding frames to their correct destination.

Consider **claim 4**, and as applied to claim 3, Song et al. (# 2003/0190168) clearly show and disclose a communication system wherein the frame processor transmits the frame to the appropriate destination depending on its target address (Figs. 9 and 12 and page 4, paragraphs [0046] and [0047]: "Upon receiving the tag Ethernet frame (Step 421), the LLID/MUX/DEMUX layer 320 of the OLT 310 determines whether a tag Ethernet frame type is recorded in the Ethernet type field (Step 422). If so, the LLID/MUX/DEMUX layer 320 determines a corresponding port of the bridge 330 by examining the LLID field (Step 423). The LLID/MUX/DEMUX layer 320 thereafter deletes the Ethernet type field and the LLID field from the Ethernet frame, recalculates FCS (Step 424), and then transmits the resulting Ethernet frame to the bridge 330 through a

corresponding port. After receiving the Ethernet frame (Step 411), the bridge 330 determines a destination address of the Ethernet frame and transmits the Ethernet frame to the LLID/MUX/DEMUX layer 320 through the particular one of the ports 331 – 335 that corresponds to the destination address (Step 412).").

Consider **claim 5**, and as applied to claim 2, RFC 3422 clearly shows and discloses a communication system wherein the frame reflecting and multiplexing (FRM) layer filters the addresses stored in the address table and only searches addresses that have been flagged (Section 5.4. Filtering at network adapters and MAPOS switches: "Network adapters should have the following frame filtering functions. Each NA in a VLAN is configured with the MAPOS addresses of its peer NAs that belongs to the same VLAN. A NA should only accept bridged MAPOS frames with a source MAPOS address of one of its VLAN peers. A NA should never import discovered address table entries with a MAPOS address that is not the address of one of its VLAN peers. A line interface of a MAPOS switch is made aware of the MAPOS addresses in the VLAN to which the interface participates. The interface discards all incoming bridged traffic (from the NA) that is destined to addresses outside of the VLAN's set."). RFC 3422 does not specifically state that target addresses will be flagged as part of the filtering process. However, Examiner takes Official Notice that it is notoriously well known in the art that a common method of filtering items in a table is to flag some of the items and then perform some operation, such as a search, only on the items that have been flagged. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to flag the addresses stored in a table and search only addresses that are flagged as a method of filtering the addresses, as in RFC 3422, in the

communication system as in Song et al. in view of RFC 3422 and further in view of Song et al. for the purpose of reducing the amount of time spent searching for addresses in the address table.

Consider **claim 6**, and as applied to claim 5, RFC 3422 clearly shows and discloses a communication system wherein the processor attaches a broadcasting tag to a preamble of a frame in the case where the target address of the frame is not in the address table, and transmits the broadcasting tag to the physical layer (Section 3.1. Destination MAPOS address for forwarding a MAC unicast frame: "In NA, entries of the form {destination MAC address, destination MAPOS address} are held in its address table. When a MAC frame is received by the Ethernet interface, the address table is searched using the destination MAC address as the key. ... If no matching entry exists, MAC broadcast forwarding (3.2) is used.").

Consider **claim 7**, and as applied to claim 1, Song et al. (# 2003/0190168) clearly show and disclose a communication system wherein the frame reflecting and multiplexing (FRM) layer performs a multiplexing function between frames from an upstream layer and frames that are reflected in the frame reflecting and multiplexing (FRM) layer (Figs. 8 and 10 and page 3, paragraph [0039]: "The LLID MUX/DEMUX layer 350 checks an Ethernet type field of an Ethernet frame received from the OLT 310. If the Ethernet type field indicates a tag Ethernet frame, the LLID MUX/DEMUX layer 350 checks an LLID field and transmits the Ethernet frame to the LLC layer 360 only if the LLID is identical to its own LLID, and discards the other frames whose LLIDs are not identical to its own LLID.

During upstream transmission to the OLT 310, the LLID MUX/DEMUX layer 350 inserts, into the existing Ethernet frame, an Ethernet type field in which a tag Ethernet type is recorded and an LLID field in which its own LLID is recorded, to thereby convert the existing Ethernet frame into the tag Ethernet frame.").

Claim 8, 9, 10 and **11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Song et al. (U.S. Patent Application Publication # 2003/0190168)** in view of **RFC 3422 ("Forwarding Media Access Control (MAC) Frames over Multiple Access Protocol over Synchronous Optical Network/Synchronous Digital Hierarchy (MAPOS)")**.

Consider **claim 8**, Song et al. clearly show and disclose a communication method for a system supporting peer-to-peer communication between ONUs in an Ethernet-based PON, the method comprising receiving a first frame from the ONUs and forwarding to an upper layer or reflecting to an ONU the first frame based on results of the address determination (Figs. 9 and 12 and page 4, paragraphs [0046] and [0047]: "Upon receiving the tag Ethernet frame (Step 421), the LLID/MUX/DEMUX layer 320 of the OLT 310 determines whether a tag Ethernet frame type is recorded in the Ethernet type field (Step 422). If so, the LLID/MUX/DEMUX layer 320 determines a corresponding port of the bridge 330 by examining the LLID field (Step 423). The LLID/MUX/DEMUX layer 320 thereafter deletes the Ethernet type field and the LLID field from the Ethernet frame, recalculates FCS (Step 424), and then transmits the resulting Ethernet frame to the bridge 330 through a corresponding port. After receiving the

Ethernet frame (Step 411), the bridge 330 determines a destination address of the Ethernet frame and transmits the Ethernet frame to the LLID/MUX/DEMUX layer 320 through the particular one of the ports 331 – 335 that corresponds to the destination address (Step 412)."). Song et al. do not disclose generating an address table that matches a tag of the first frame and a transmission point address, managing the address table, and determining a target address of the frame based on the address table. However, RFC 3422 clearly shows and discloses generating an address table, managing the address table, and determining a target address of the frame based on the address table (Fig. 8 and Section 3.3.2. Dynamic setup of address table: "A NA discovers entries for its address table from incoming encapsulated MAPOS frames. The NA adds the pair {source MAC address, source MAPOS address} to its address table when it receives an encapsulated MAPOS frame. ... The timer is reset each time an encapsulated MAPOS frame with the same source MAC address is received. ... If a discovered MAPOS address for a MAC address differs from the previously discovered address, the new one takes precedence and the address table entry must be overwritten. ... In NA B2, the received MAPOS frame is decapsulated, and the MAC frame is forwarded to LAN N2. ... Via the Ethernet interface on NA B2, the ARP reply frame is received, and MAPOS encapsulation is done. ... Because the entry {h1, b1} is registered in the address table, b1 is determined to be the destination MAPOS address. The bridged frame is forwarded to the MAPOS network. MAPOS network delivers the bridged MAPOS frame to NA B1."). Therefore, it would have been obvious to a person of ordinary skill in the

art at the time the invention was made to incorporate generating an address table, managing the address table, and determining a target address of the frame based on the address table as taught by RFC 3422 in the communication method as in Song et al. for the purpose of creating and managing an address table to use in forwarding frames to the correct destination.

Consider **claim 9**, and as applied to claim 8, RFC 3422 clearly shows and discloses a communication method that comprises receiving a frame transmitted from an upper layer and searching the address table to find the target address, and attaching a tag corresponding to the target address to a preamble of the frame, and transmitting the tag to a physical layer (Fig. 8 and Section 3.3.2. Dynamic setup of address table: "A NA discovers entries for its address table from incoming encapsulated MAPOS frames. The NA adds the pair {source MAC address, source MAPOS address} to its address table when it receives an encapsulated MAPOS frame. ... The timer is reset each time an encapsulated MAPOS frame with the same source MAC address is received. ... If a discovered MAPOS address for a MAC address differs from the previously discovered address, the new one takes precedence and the address table entry must be overwritten. ... In NA B2, the received MAPOS frame is decapsulated, and the MAC frame is forwarded to LAN N2. ... Via the Ethernet interface on NA B2, the ARP reply frame is received, and MAPOS encapsulation is done. ... Because the entry {h1, b1} is registered in the address table, b1 is determined to be the destination MAPOS address. The bridged frame is forwarded to the MAPOS network. MAPOS network delivers the bridged MAPOS frame to NA B1.").

Consider **claim 10**, and as applied to claim 8, Song et al. clearly show and disclose a communication method wherein the frame is transmitted to the appropriate destination depending on its target address (Figs. 9 and 12 and page 4, paragraphs [0046] and [0047]: "Upon receiving the tag Ethernet frame (Step 421), the LLID/MUX/DEMUX layer 320 of the OLT 310 determines whether a tag Ethernet frame type is recorded in the Ethernet type field (Step 422). If so, the LLID/MUX/DEMUX layer 320 determines a corresponding port of the bridge 330 by examining the LLID field (Step 423). The LLID/MUX/DEMUX layer 320 thereafter deletes the Ethernet type field and the LLID field from the Ethernet frame, recalculates FCS (Step 424), and then transmits the resulting Ethernet frame to the bridge 330 through a corresponding port. After receiving the Ethernet frame (Step 411), the bridge 330 determines a destination address of the Ethernet frame and transmits the Ethernet frame to the LLID/MUX/DEMUX layer 320 through the particular one of the ports 331 – 335 that corresponds to the destination address (Step 412).").

Consider **claim 11**, and as applied to claim 9, RFC 3422 clearly shows and discloses a communication method wherein the frame reflecting and multiplexing (FRM) layer filters the addresses stored in the address table and only searches addresses that have been flagged (Section 5.4. Filtering at network adapters and MAPOS switches: "Network adapters should have the following frame filtering functions. Each NA in a VLAN is configured with the MAPOS addresses of its peer NAs that belongs to the same VLAN. A NA should only accept bridged MAPOS frames with a source MAPOS address of one of its VLAN peers. A NA

should never import discovered address table entries with a MAPOS address that is not the address of one of its VLAN peers. A line interface of a MAPOS switch is made aware of the MAPOS addresses in the VLAN to which the interface participates. The interface discards all incoming bridged traffic (from the NA) that is destined to addresses outside of the VLAN's set."). RFC 3422 does not specifically state that target addresses will be flagged as part of the filtering process. However, Examiner takes Official Notice that it is notoriously well known in the art that a common method of filtering items in a table is to flag some of the items and then perform some operation, such as a search, only on the items that have been flagged. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to flag the addresses stored in a table and search only addresses that are flagged as a method of filtering the addresses, as in RFC 3422, in the communication system as in Song et al. for the purpose of reducing the amount of time spent searching for addresses in the address table.

Conclusion

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

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Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Leah Richmond whose telephone number is (571) 270-1774. The Examiner can normally be reached on Monday-Thursday from 9:00am to 6:00pm Eastern Standard Time.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Perez-Gutierrez can be reached at (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Leah Richmond

L.L.R./llr

March 9, 2007